Notice of Allowability	Application No.	Applicant(s)	
	10/808,827	PRASAD, ABANESHWAR	
	Examiner	Art Unit	
	Robert Scruggs	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *1/9/07*.

2. ☒ The allowed claim(s) is/are *1-4 and 7-23*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

LEE D. WILSON
PRIMARY EXAMINER

DETAILED ACTION

1. This office action is in response to the amendment received on January 9, 2007. Applicant's arguments, see pages 2-5, filed January 9, 2007,I with respect to 1-4 and 7-23 have been fully considered and are persuasive. The rejection of claims 1-4 and 7-23 has been withdrawn.

Allowable Subject Matter

2. Claims 1-4 and 7-23 are allowed.

3. The following is an examiner's statement of reasons for allowance: The present invention pertains to a polishing pad. It is the examiner's opinion that the art of record considered as a whole, alone or in combination, neither anticipates nor renders obvious of a hydrophobic region in combination with an endpoint detection port and a hydrophilic region, said hydrophobic region being formed adjacent to and completely surrounding the endpoint detection port, said hydrophobic region also having a surface energy of 34mN/m or less and said hydrophilic region having a surface energy more than 34mN/m, together in combination with the rest of the limitations or the independent claims.

4. The closest prior art is made of Lehman et al. (2003/0190864), Prasad et al. (6884156) and Prasad (7059936). Lehman et al. discloses a polishing pad having a polishing layer (188), a membrane (194) that completely surrounds an endpoint detection port (182) wherein said polishing layer and said membrane are formed from polyurethane. Prasad et al. (6884156) discloses a multi-layered polishing pad having optically transmissive material. Prasad (7059936) discloses a low surface energy-

polishing pad including a hydrophobic repeating unit and a hydrophilic repeating unit where the entire polishing pad is formed with a surface energy of 34mN/m or less.

5. However, the prior art fails to disclose a hydrophobic region formed adjacent to and completely surrounding an endpoint detection port with a surface energy of 34mN/m or less in combination with a hydrophilic region having a surface energy more than 34mN/m.

Response to Arguments

6. Applicant's arguments have been fully considered and are persuasive.

7. Applicant's contends that, "despite the fact the alleged hydrophobic region and the alleged hydrophilic region both comprise the same material, i.e., polyurethane, the Office Action asserts that the hydrophobic region "can inherently be formed to have a surface energy of 34mN/m or less depending upon the application" while the hydrophilic region "being formed from polyurethane... can inherently be formed to have a surface energy of 34mN/m or more depending upon the application. Thus, the disclosure of membrane 194 comprising polyurethane, regardless of its alleged ability to function as a sealant, fails to teach a hydrophobic region comprising a polymeric material having a surface energy of 34mN/m or less. As described in the specification, polyurethanes have a surface energy of 34mN/m or more (Para. 0019) and are hydrophilic as defined by the pending claims. It is generally recognized in the art the polyurethanes have higher surface energy values, and polyurethane has a surface energy of 45mN/m. See D.B. James, "CMP Polishing Pads" (Chapter 6) in Chemical-Mechanical

Planarization of Semiconductor Materials (Springer, 2004), p. 169. Applicant is unaware of any conventional polyurethanes having a surface energy of 34nM/m or less."

a. The examiner agrees with the statements made above. It would not be inherent to make different regions of the polishing pad formed with different surface energies since both regions are formed with the same material (i.e. polyurethane).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Scruggs whose telephone number is 571-272-8682. The examiner can normally be reached on Monday-Friday, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEE D. WILSON
PRIMARY EXAMINER

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